CLAIMS

What is claimed is:

1. A computer method for generating a response output to be provided to a user of a computer; the method comprising the steps of:

   5   receiving a response representation specifying a structured output for use as the basis for the response output to the user, the response representation associated with a domain model for a speech-enabled application;

   selecting a syntax template based on a goal-directed rule invoked in response to the response representation; and

   10   producing the response output based on the selected syntax template, the response representation, and the domain model.

2. The computer method of Claim 1, wherein the response representation is received from a reasoning facility that generates the response representation based on the domain model, a goal-directed rules database, and a spoken

   15   utterance provided by the user.

3. The computer method of Claim 2, wherein the response representation is a goal or proposition based on the spoken utterance.

4. The computer method of Claim 3, wherein the proposition comprises an attribute, an object, and a value.

   20   5. The computer method of Claim 1, wherein the step of selecting one of the syntax templates comprises generating a goal based on the response representation and determining the selected syntax template based on the

goal-directed rule selected from a goal-oriented rules database based on the goal, the goal-directed rule identifying the selected syntax template.

6. The computer method of Claim 1, wherein the domain model comprises an ontological description of the domain model based on entities, classes, and attributes, and a lexicon providing synonyms and parts of speech information for elements of the ontological description.

7. The computer method of Claim 1, wherein the response output is a text string capable of conversion to audio output.

8. A system for generating a response output to be provided to a user of a computer, the system comprising:

a language generator for receiving a response representation specifying a structured output for use as the basis for the response output to the user, the response representation associated with a domain model for a speech-enabled application; and

a reasoning facility coupled to the language generator, the reasoning facility for selecting a syntax template based on a goal-directed rule invoked in response to the response representation, the language generator producing the response output based on the selected syntax template, the response representation, and the domain model.

9. The system of Claim 8, wherein the language generator receives the response representation from the reasoning facility that generates the response representation based on the domain model, a goal-directed rules database, and a spoken utterance provided by the user.

10. The system of Claim 9, wherein the response representation is a goal or proposition based on the spoken utterance.

11. The system of Claim 10, wherein the proposition comprises an attribute, an object, and a value.

5   12. The system of Claim 8, wherein the language generator generates a goal based on the response representation and provides the goal to the reasoning facility, and the reasoning facility determines the selected syntax template based on the goal-directed rule selected from a goal-oriented rules database based on the goal, the goal-directed rule identifying the selected syntax template.

10   13. The system of Claim 8, wherein the domain model comprises an ontological description of the domain model based on entities, classes, and attributes, and a lexicon providing synonyms and parts of speech information for elements of the ontological description.

14. The system of Claim 8, wherein the response output is a text string capable of
15   conversion to audio output.

15. A computer program product comprising:
        a computer usable medium for generating a response output to be provided to a user of a computer;
        a set of computer program instructions embodied on the computer usable
20   medium, including instructions to:
                receive a response representation specifying a structured output for use as the basis for the response output to the user, the response representation associated with a domain model for a speech-enabled application;

select a syntax template based on a goal-directed rule invoked in response to the response representation; and

produce the response output based on the selected syntax template, the response representation, and the domain model.

16. The computer program product of Claim 15, wherein the response representation is received from a reasoning facility that generates the response representation based on the domain model, a goal-directed rules database, and a spoken utterance provided by the user.

17. The computer program product of Claim 16, wherein the response representation is a goal or proposition based on the spoken utterance.

18. The computer program product of Claim 17, wherein the proposition comprises an attribute, an object, and a value.

19. The computer program product of Claim 15, wherein the set of computer program instructions includes instructions to generate a goal based on the response representation and determine the selected syntax template based on the goal-directed rule selected from a goal-oriented rules database based on the goal, the goal-directed rule identifying the selected syntax template.

20. The computer program product of Claim 15, wherein the domain model comprises an ontological description of the domain model based on entities, classes, and attributes, and a lexicon providing synonyms and parts of speech information for elements of the ontological description.

21. The computer program product of Claim 15, wherein the response output is a text string capable of conversion to audio output.

22. A system for generating a response output to be provided to a user of a
computer; the system comprising:

    means for receiving a response representation specifying a structured
output for use as the basis for the response output to the user, the response
5   representation associated with a domain model for a speech-enabled
application;

    means for selecting a syntax template based on a goal-directed rule
invoked in response to the response representation; and

    means for producing the response output based on the selected syntax
10   template, the response representation, and the domain model.

23. A computer program propagated signal product comprising:

    a computer usable propagated medium for generating a response output to
be provided to a user of a computer; and

    a set of computer program instructions embodied on the computer usable
15   propagated medium, including instructions to:

        receive a response representation specifying a structured output for
use as the basis for the response output to the user, the response
representation associated with a domain model for a speech-enabled
application;

20   select a syntax template based on a goal-directed rule invoked in
response to the response representation; and

        produce the response output based on the selected syntax template,
the response representation, and the domain model.